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| 10/584,380 | 06/27/2006 | Eiichi Iida | 4386.75320 | 1258 |
| 24978 7590 10/02/2008 GREER, BURNS & CRAIN 300 S WACKER DR 25TH FLOOR CHICAGO, IL 60606 | | | | |
| EXAMINER | | | | |
| FISCHER, JUSTIN R | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/584,380

Applicant(s)

IIDA, EIICHI

Examiner

Justin R. Fischer

Art Unit

1791

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 4-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5 and 6 is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/5508)
- Paper No(s)/Mail Date 082908
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Inventor's Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwami (JP 5-178033). As best depicted in Figure 3, Iwami teaches a pneumatic tire construction comprising a fastening bead core 3 and a non-fastening bead core 5, wherein the diameter of said non-fastening bead core is less than the diameter of said fastening bead core.

With respect to said bead cores, Iwami generally depicts said cores as having a rectangular arrangement. While the reference fails to specifically disclose the dimensions of said cores, one of ordinary skill in the art at the time of the invention would have readily appreciated the broad ranges of the claimed invention, in view of Mitsuyoshi. Mitsuyoshi is directed to an extremely similar tire comprising a pair of bead cores, wherein said bead cores have a width (thickness in axial direction) to height (thickness in diametric direction) ratio between 0.70 and 0.90 in order to maintain bead strength (Abstract). As currently drafted, the claims require a bead core having a width to height ratio between 0.083 (1 mm/12 mm) and 0.75 (3 mm/4 mm), which overlaps with that detailed by Mitsuyoshi. Absent any conclusive showing of unexpected results,

one of ordinary skill in the art at the time of the invention would have found it obvious to select a ratio between 0.70 and 0.75 in accordance to the claimed invention.

It is noted that while the claims define the cores in terms of absolute dimensions, it is well recognizes that absolute tire dimensions vary as a function of the specific tire being manufactured (dimensions generally increase with increased tire size). In this instance, the absolute dimensions detailed by the claimed invention are on the order of those dimensions commonly associated with bead cores. For example, given a bead core height of 4 mm, one of ordinary skill in the art at the time of the invention would have found it obvious to form said core with a width between 2.8 mm and 3.6 mm. It is emphasized that applicant has not provided a conclusive showing of unexpected results to establish a criticality for the claimed absolute dimensions.

Lastly, regarding claim 1, it appears that the dimensions of the fastening bead core are directly related to the total tensile strength of said core (Paragraph 20 of original disclosure). Thus, one of ordinary skill in the art at the time of the invention would have expected the bead construction of Iwami in view of Mitsuyoshi to satisfy the broad range of the claimed invention.

As to claim 2, the figures of Iwami generally depict the inner end of the non-fastening bead core as being arranged at a height equal to the inner end of the carcass plies. In the depicted arrangement, the respective cores are thus separated by a dimension equal to two times the thickness of the carcass layer. It is noted, though, that the general teaching of Iwami is the inclusion of a second bead core (non fastening bead core) in order to improve tire uniformity and such a benefit is applicable to tire

constructions including a single carcass ply- in such an instance, the difference between the cores would be one times the thickness of the carcass layer. It is emphasized that Iwami fails to place any criticality on the number of carcass plies and it is well recognized that tire disclosures are broadly applicable to a wide variety of tire constructions unless otherwise detailed.

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iwami and further in view of Yakida (JP 8-175126). As disclosed above, Iwami substantially teaches the claimed tire construction, including a fastening and non-fastening bead core. While the reference fails to expressly describe the makeup of the bead cores, it is extremely well known that such cores are composed of rubber covered steel cords and more particularly, the rubber used in such cores (insulation rubber) commonly has a hardness in accordance to the claimed invention, as shown for example by Yakida (Abstract). Lastly, it is evident that adjacent steel cords are separated by a certain thickness of insulation rubber and the claim defines an extremely broad range (0.1-1.5 mm) that is consistent with dimensions in the bead core. Thus, one of ordinary skill in the art at the time of the invention would have found it obvious to form the insulation rubber of Yakida with a thickness between 0.1 and 1.5 mm.

Allowable Subject Matter

4. Claims 5 and 6 are allowed.

Response to Arguments

5. Applicant's arguments with respect to claims 1, 2, and 4 have been considered but are moot in view of the new ground(s) of rejection. It is further noted that the

112,2nd paragraph rejections have been withdrawn in light of applicant's arguments. A new rejection has been set forth regarding claims 1, 2, and 4.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R. Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Justin Fischer
/Justin R Fischer/
Primary Examiner, Art Unit 1791
September 29, 2008

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